Volunteer Firemen

MAY

1940

NATIONAL FIRE PROTECTION ASSOCIATION
INTERNATIONAL
60 Batterymarch Street Boston, Massachusetts

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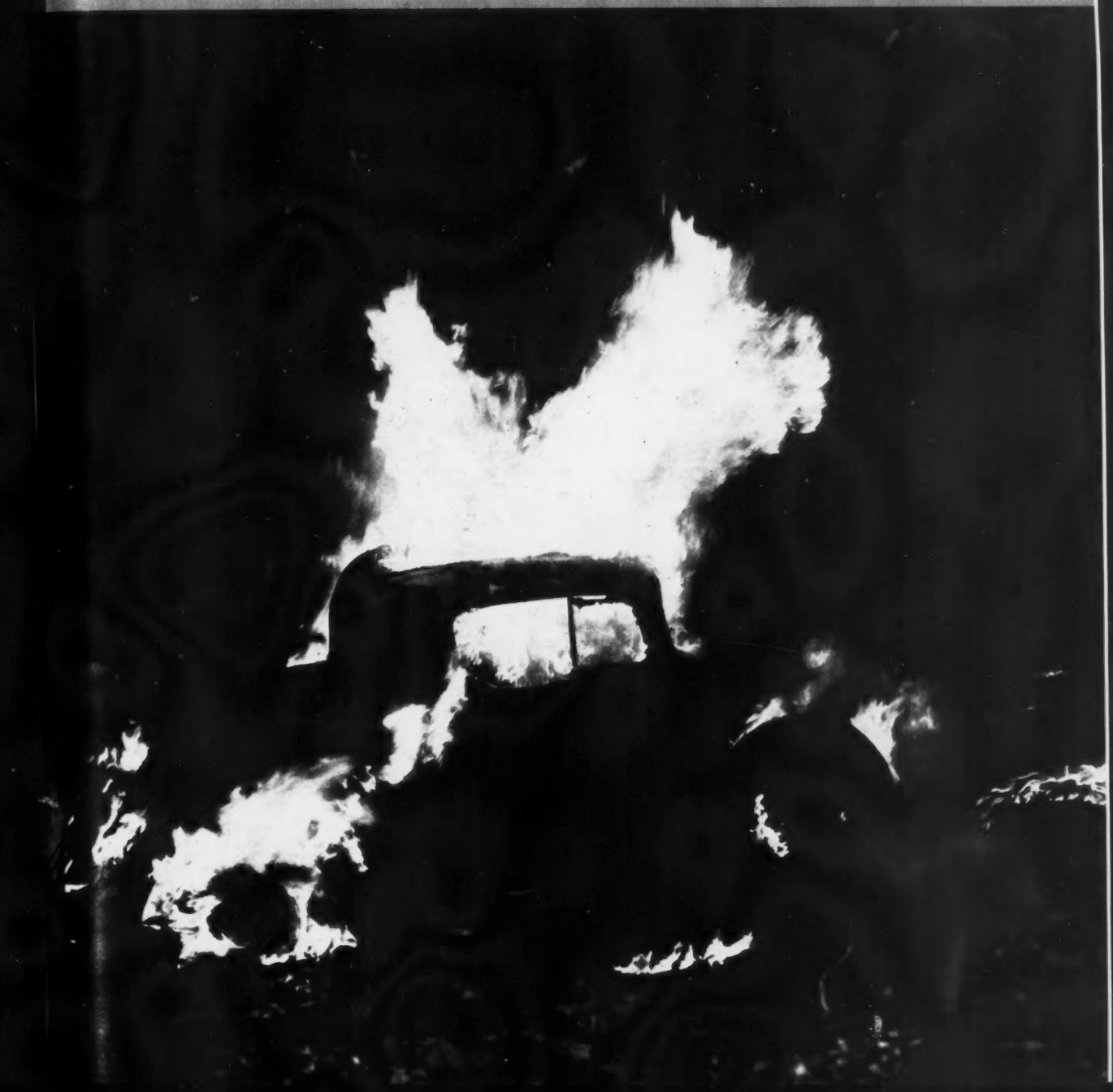
William Tuck



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Volunteer Firemen

National Fire Protection Association

Volume 7 Number 5

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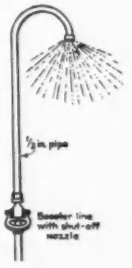
THIS month's cover picture shows a car fire supposedly caused by overheating while going over a steep grade on Overlook Mountain, near Woodstock, Ulster county, New York.

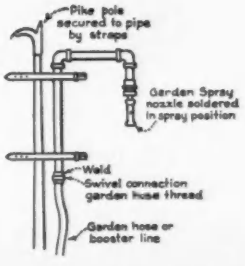
THE article on chimney fires in the February issue proved very popular. It brought among other letters the following from Lieutenant W. J. Birmingham of the Monson Fire Department (Massachusetts):

"I know we profit in many ways from your magazine. One of our most cherished possessions is a chimney periscope we made from a back-issue print which we copied. We are now making one from a 2-inch brass tubing and using flashlight lenses for glass."

Chief J. W. Randlette and his Richmond Fire Department (Maine), are not fooling when they put on their letterhead the slogan "We aim to save more than the cellar." He says, "It is such articles as this that makes the magazine valuable to small departments." He also has several comments which are to the point: "Many chimney fires that we have are near the top of the chimney. A rapid condensation in the top of the chimney causes a soot accumulation there. Instead of a rope on your chimney sweep, use a small link chain which is readily purchasable at any hardware store. Top chimney fires burn off the rope. While you can almost always get the sweep back, it causes a delay. Many times however a sweep is not heavy enough to start the plug. We have had many chimneys so plugged a pike pole had to be pushed down the chimney to clear it."



A spray nozzle on a gooseneck is a special tool for chimney fires. This sketch was drawn from almost identical designs suggested by Chief J. W. Randlette of the Richmond Fire Department (Maine) and Leo A. Mons of the Little Rock Fire Department (Arkansas). The roofs and chimneys on which the tool is to be used will govern the length of the pipe and the radius of the gooseneck.


Pike pole secured to pipe by straps
Garden Spray nozzle soldered in spray position
Weld
Swivel connection garden hose thread
Garden hose or booster line

This assembly which can be made from ordinary ½-inch pipe and fittings is adaptable to varying roof and chimney conditions such as those involving high, weak, or ice encrusted chimneys. The pike pole and straps allow adjustment to any reach desired.

New Members During April

LAST month 9 departments with 127 men joined the Volunteer Firemen's Section for the first time. In addition 70 departments with 1557 men renewed membership. This makes the total enrollment 696 departments and 14,905 men. The following departments are newly enrolled:

Campbell Volunteer Fire Department, Campbell, California.

Elgin National Watch Company, Elgin, Illinois.

Oswego Fire Department, Oswego, Illinois.

Hartland Volunteer Fire Department, Hartland, Michigan.

A. E. Phelps Engine Company No. 1, Crown Point, New York.

Lockland Fire Company, Lockland, Ohio.

West Ridge Hose Company, Erie, Pennsylvania.

Norwood Volunteer Fire Company No. 1, Norwood, Rhode Island.

Norfolk and Western Railway, Roanoke, Virginia.

THE estimated U. S. fire loss for March, 1940, according to the National Board of Fire Underwriters is $29,788,800. This figure is based on notices of incurred loss received by companies members of the board, plus an allowance for unreported and uninsured losses. Losses for the first three months of 1940 are $100,459,700 ahead of the losses for the same two months of 1939. The following table shows the losses for each month of 1939 and for the first three months of 1940:

	1939	1940
January	$27,615,316	$36,260,650
February	29,303,520	34,410,250
March	30,682,168	29,788,800
Total 3 months	$87,601,004	$100,459,700
April	27,061,522	. . .
May	27,031,700	. . .
June	24,190,700	. . .
July	22,468,304	. . .
August	22,800,500	. . .
September	22,837,250	. . .
October	24,300,500	. . .
November	27,248,160	. . .
December	27,959,200	. . .
Total 12 months	$313,498,840	. . .

There is still time for you to appoint one of your members to represent your company or department at the National Meeting of Volunteer Firemen at Atlantic City on May 9th.

VOLUNTEER FIREMEN last month announced the national meeting of volunteer firemen which is to be held in Atlantic City on Thursday, May 9. A considerable number of fire companies and departments have already followed our suggestion that they appoint someone to represent the company or department at this meeting.

There is still time to do this. All volunteer fire companies are invited to be represented at this meeting. Any volunteer fireman will be welcome whether an official company representative or not.

This is the first national meeting of volunteer firemen and is under the sponsorship of the Volunteer Firemen's Section of the National Fire Protection Association. This section is the only national organization devoted to the problems of volunteer firemen and volunteer fire departments.

The entire day on Thursday, May 9, is to be devoted to sessions of particular interest to volunteers. The morning session will be a Volunteer Firemen's Forum at which Dr. David J. Price, of the U. S. Department of Agriculture and Vice-President of the N.F.P.A., will preside. Speakers will be Horatio Bond, Managing Editor of VOLUNTEER FIREMEN; George L. Townsend, Acting Principal of the Public Service Institute, Pennsylvania; and Sherwood Brockwell, State Fire Marshal and Chief of the North Carolina State Volunteer Fire Department. Two subjects of great importance to volunteer departments are scheduled for discussion: firemen's training and the problem of giving outside aid.

An afternoon session will embrace a general fire waste forum at which a discussion of what can be done about fires in the home will be presented by a group of distinguished national authorities. The day's program will be completed with a motion picture program, "Fires in Review—1940."

Bucket brigades are not yet extinct. This fire destroyed a small variety store in Delta, Utah. By the time the story got on the newspaper wires, they had it that the whole business district was threatened. It shows what a town is up against when it doesn't have a water system, and adequate fire equipment.

THE Volunteer Firemen's Forum is part of a whole series of sessions during the period May 7-11, during which national experts discuss fire matters. Programs of the entire week of meetings are now being mailed to those who have written for copies. If you will write to the National Fire Protection Association, 60 Batterymarch Street, Boston, Mass., saying that you are coming, a program will be mailed to you.

The volunteers' program on May 9 has been arranged for the convenience of volunteers who may wish to attend for just the one day. Those coming, however, are invited to attend other sessions of the meeting. The Fire Marshals' Section, for example, will meet on Tuesday, May 7, and Wednesday, May 8. These sessions would be of great interest to firemen whose duties include inspection work or investigation of fires.

The sessions on Friday, May 9, and Saturday, May 11, will be devoted to hearing numerous technical committee reports. Some idea of the wide scope of the work of the meeting is shown by the following list of subjects on which committees are reporting this year.

- Air Conditioning
- Automatic Sprinklers
- Boat Basins and Municipal Marinas
- Carbon Dioxide Systems
- Control of Incipient Fires in Homes and Small-Unit Properties
- Dust Explosion Hazards of Sulphur
- Electrical Inspection Law
- Explosives Ordinance
- Fire Alarm Systems
- Flameproofing of Textiles
- Leakage of Underground Gasoline Tanks
- Liquefied Petroleum Gas Standards
- National Electrical Code
- Paint Spraying
- Piers and Wharves Ordinance
- Protection of Records
- Pyroxylin Plastic in Warehouses and Stores
- Safety to Life
- Trailers and Trailer Camps
- Truck Transportation
- Water Spray Nozzles

MARYLAND is a state in which all fire departments are volunteer except one (Baltimore city). It was one of the first states to set up a program of firemen's training. Last year 91 fire departments in the state held training classes. Last month Chief James W. Just, director of the program, announced that its facilities would be made available to fire departments in other states as well.

The Maryland State Firemen's Association originally induced the University of Maryland to undertake training work for firemen. The program is set

The hangars of the LaGuardia Field-North Beach airport at New York City may be the most modern in the world but the ruins of Hangar No. 4 shown above prove that the same old mistakes will cause disastrous fires. Those in charge of the hangar project showed good judgment in providing for automatic sprinkler protection, but poor judgment in the means used to install it. The first mistake was made when, to install sprinkler pipes and to do painting, the hangar was filled with a forest of quick-burning wooden scaffolding without taking the precaution of flame-proofing it. The second was the reported delay of some twenty minutes during which the fire was fought by watchmen with chemical extinguishers instead of calling the fire department. With this delay the damage was extensive in spite of firemen's best efforts.

up as a Fire Service Extension Division of the College of Engineering at College Park.

THESE auspices have assured Maryland firemen a competent training program. An annual short course, first held in 1931, has been augmented since 1937 by a 25-unit course available to any fire department in the state. This course covers basic fire department operations. Last year it was supplemented with a 23-unit advance course open to those completing the basic course. It can therefore be seen that the Maryland program is a sound one and one that has been thoroughly tested.

Thirty-nine of the states and two of the Canadian provinces have training programs for firemen. In only 17 of these, however, does the training program offer a course comparable to the Maryland one. In many states a course of training is available only to those who are able to attend the annual short course. In others, training is available only to the extent of the time of one or more field instructors. There are many departments which for one reason or another cannot now obtain training and it is for these that the Maryland program will fill a real need.

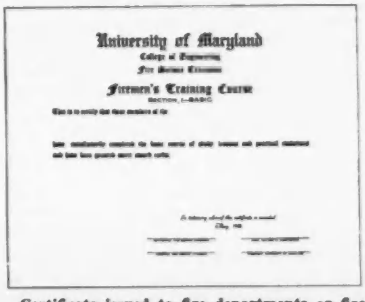
The fire departments taking the courses will be expected to pay for them, but a nominal charge of about 10 cents per lesson per man that is necessary to defray expenses is the only expense.

Chief Just has issued the following outline of procedure by which any group of volunteer firemen desiring to avail themselves of the basic training course should be guided:

1. Organize the group into a class and select the best available man to serve as instructor.

2. Send a typewritten list of the class members with the name and the address of the instructor to Chief J. W. Just, Director, Fire Service Extension, College of Engineering, University of Maryland, College Park, Md.

3. Send check made payable to the University of Maryland, Fire Service Extension, for an amount equal to $2.50 per class member. (This figures 10 cents per lesson for the 25 lessons in the course. Some departments have indicated their plan to pay for the course from company funds and then collect 10 cents per night from the members of the class.)


University of Maryland
College of Engineering
Fire Service Extension
Firemen's Training Course

Certificate issued to fire departments or fire companies completing the Maryland Firemen's Training Course.

4. Upon receipt of the list of class members and check, the entire course material for all men, including book covers, lesson sheets, reference material and quiz sheets, will be forwarded by express, charges collect, to the instructor. He will also be furnished complete detailed instructions for conducting the classes.

5. After each lesson, quiz sheets will be graded by the instructor and mailed to the Director, Fire Service Extension, University of Maryland, where they will be checked and proper records kept.

6. To each fireman acquiring an average grading of 70 per cent on the 16 classroom lessons and an attendance at six of the nine outdoor drill sessions, will be awarded the regular University of Maryland individual award card.

7. Each department will also be given the University of Maryland certificate for framing carrying the names of all men in the department completing the course.

8. All men completing the course will also be privileged to purchase direct from the manufacturer the University of Maryland sleeve insignia in University colors of black and gold to be worn on the shoulder of the uniform sleeve.

9. Men completing the Basic Training Course will be entitled to enroll for the University of Maryland Advance Training Course.

10. The lesson sheets that go with the course form a whole volume. Upon completion of the course, therefore, each fireman will have acquired a reference manual of over 200 pages that will in itself be worth the entire cost.

FOREST FIRES FOR FUN

This is the amazing story of how a group of people, of the oldest American stock, set forest fires—and for the fun of it!

By John P. Shea

Mr. Shea, psychologist of the U. S. Forest Service, tells about the problem and what the Forest Service is trying to do about it. Abstracted from a paper read before the American Forestry Association, Biloxi, Mississippi, February 1-3, 1940.

ONE old lady on her death bed summed up in a few words the feeling of the entire resident population of the Southern National Forests. She lay for weeks sick and disabled. A friend in the Forest Service called on her at her request. She said to him in effect, "I'm proud you come. Maybe I ain't goin' to get up again. I reckon I ain't." My friend asked what he could do for her. She replied, "There ain't nothin' I reckon, because you wouldn't let me do what I want." "What do you want to do?" my friend asked her. "Well," said the old lady, "I got just one wish. I'm a-hurtin' to burn the woods once more before I die."

Such emotional needs are typical of whole groups in our southern forests. And such emotional needs are expressing themselves thousands of times each year in the form of woods burning, by disadvantaged ruralists, along lines laid down in the culture pattern of their pioneer forefathers.

There is an annual average of 35,700 fires on all protected forest areas—Federal, State and Private—in the eleven Southern States that constitute Region-8 of the U. S. Forest Service. We find over 90 per cent of them to be caused by man. Compared to the nation as a whole, 48 per cent of all forest fires in the United States occur in this region. Of man-caused fires, 53 per cent of the total throughout the United States take place here. Fifty-two per cent of the area burned over is in these eleven southeastern states. The damage done to forest resources, to soils and human resources is vast, and difficult to estimate in dollars and cents.

OUR main concern is what to do to prevent them. The United States Forest Service is attempting new ways to answer that important question. From June to December, 1939, the Federal Forest Service Division of Fire Control sent me, a social scientist, a psychologist, to make a field study of the people who cause forest fires. This is quite a different matter from the former post-mortem studies of fires that people set. A National Forest Unit of Alabama, the Talladega, was selected for study because it was thought to be a typical southern forest. The lives of the people, the way they make their living, the various forest resources, and the extent of the woods burning done there were thought to be fair samples of such conditions throughout the southern states.

The forest area studied consisted of some 440,000 acres gross and 180,000 acres net, Federally owned, of a National Forest unit lying along the southern-most spur of the Blue Ridge Mountains in Alabama. Eighteen hundred families, some 10,000 people, dwell within the forest boundaries.

These Forest residents are of English-Irish-Scotch stock. They and their ancestors have lived in the forest from three to five generations. Their ancestors moved into this area in the westward trek from the Carolinas and Georgia during the decades 1820 to 1850. That was just after Andrew Jackson and his army had broken the hold of the Indians on this territory and opened the land to settlement by the white man. The ancestors of these people, chiefly cotton-corn agrarians, came westward in wagons with their families, the family Bible, cotton seed, and a rifle to found a new home. But they were disappointed to discover that the rich valley land had already been pre-empted by large landowners. The late arrivals were forced to take the "leavin's," the less desirable hillside and forest tracts. Here they and their descendants have dwelt ever since.

Our procedure was like plugging a watermelon. You don't cut the whole melon open; you cut into a small area and go to the heart of it.

First step was to select sample families from among the forest residents that would give us an adequate picture of the resident population as a whole. The selection was made by methods similar to those used in the Gallup poll, that is, by the selection of families typical of each sub-group.

Asked, "What is the effect of fire on the forest and on your land?", the answers included "Kills off boll weevil. Helps produce better cotton crop. Kills off snakes. Destroys ticks. Kills bean beetle. Keeps our fields from being choked up with brush. Makes grass grow better and quicker. Keeps us healthy by killing 'fever germs.' Best way to keep the woods 'clean.' Woods burning is 'right.' We have always done it. Our fathers and grandfathers burned the woods. It was 'right' for them and it is the 'right' thing for us to do."

Asked, "What is the effect of keeping fire out of the forest and off your land?", they replied, "Not much good as I can see. Makes living harder for us farmers. I reckon maybe floods are not so bad as they used to be. Maybe a few more squirrels now since they won't let us burn the woods. But we see more rattlesnakes, too."

The sociological picture of the group as a whole shows these people occupying an uncomfortable place in the class and caste system of the South. They are the "poor whites," looked down upon by the upper and middle class whites. They fail to have the respect even of the Negroes, who, as is well known, like to gain prestige by attaching themselves to "quality folks" — especially quality folks who can give the Negro handouts as well as prestige. The poor whites are unable to bestow either of these favors upon the blacks. The social position of our Southern Forest residents is one of being practically crushed between the upper and nether millstone. Economically and socially they represent a frustrated group.

WE find here an agrarian group whose culture pattern favors woods burning because of long-standing custom. Between the culture pattern as a whole and the environment as a whole, we find a conflict situation. The agrarian group is in conflict with its unfavorable forest environment. Like all human cultures this agrarian group is exploiting its environment in ways peculiar to its culture. This is done because of outmoded agricultural practices based upon the lore and tradition of their forefathers who believed in woods burning.

A proud people are these Forest residents. They come from a proud Anglo-Saxon stock. Like their ancestors they "takes no sass off'n nobody." They "insults easy" and they "shoots quick." As they have been shoved into an inferior position socially and stripped down to the bone in material possessions, their pride and sensitivity have come up. To observers from easier walks of life these hardy ruralists exhibit traits of rugged individualism characterized as "human cussedness." This is by way of overcompensation. They balance up their social and economic losses by an abundant independence and self-esteem.

There is a well-established principle in psychology that groups and individuals, when frustrated, express themselves by acts of aggression. That is to say, frustrations of a people give rise to reactions on their part in the form of injurious acts committed against

other humans and also against the environment.

Many fires are now being set in southern forests out of so-called "human cussedness." But they are really reactions to frustration.

Frustrated people have fancied as well as real grievances. They set fires to burn out an enemy; to damage a "hostile" environment. Also to get back at "Outsiders," particularly "outside" officials and CCC boys whom we have placed there and trained as fire fighters. The $30 a month, $360 a year, paid to CCC enrollees seems "big money" to Forest residents whose total family income is $200 a year or less. Accordingly, they get a kick out of seeing the "- - - - - -" enrollees, particularly Negroes, "sweat to earn that pay."

Woods burning persists among southern agrarians largely as a recreation, just as hunting and fishing persist among many of us who are descendants of people who hunted and fished for a livelihood. And for the same reason; it persists because it was once economic, but now serves as a sport. It is an urge demanding emotional release. Fire is extremely exciting. Most of us human beings thrill to it whether we like it or not. But learning *not* to like fire is an acquired taste.

The sight and sound and odor of burning woods provide excitement for a people who dwell in an environment of low-stimulation and who, quite naturally, crave excitement. Many of them have never seen motion pictures, few have radios. There are practically no organized games. Hunting, fishing are practiced and much desired, but game and fish are about extinct. Whittling, "porch-settin'," spittin' and talking are the major forms of recreation. They enjoy going to funerals and court trials.

They are people who have not yet learned to *dislike* fire. Woods burning gives them distinct emotional satisfactions which they strive to explain away (as we do hunting and fishing) by pseudo-economic reasons that spring from defensive beliefs. Their defensive beliefs are emotionalized ways of protecting their feelings, their habitual ways of life, their culture. Their sincere explanations of the value of fire in killing off snakes and boll weevil and other economic "advantages" are something more than mere ignorance. They are the defensive beliefs of a disadvantaged culture group.

How to get the woods burned off and outwit the law is a sort of game with them. It seems to be a favorite topic of conversation.

THE plan we propose for conservation and fire prevention in Southern Forests like the one studied, follows well-established principles for changing human behavior patterns. It is a plan of reëducation through social action: of gaining coöperation by helping the disadvantaged persons to help themselves. Since woods burning is an old established habit, the cure for it would seem to lie in well-established methods of habit-breaking and human learning applied to Forest resident groups.

U. S. Forestry Service officers visiting a "pappy" or family head of one of the poor-white mountain people who set forest fires as a reaction to frustration.

We cannot win their coöperation by locking horns with them in their beliefs. And mere propaganda and prohibitions against such deep-seated beliefs are about as effective as a popgun against an elephant. These southern agrarians will continue in their beliefs until actual demonstrations convince them of a better way.

THE plan proposed is to lay out in selected National Forests of the South 6 to 8 small tracts as Forest Demonstration Areas, each from 200 to 500 acres in size. The purpose of these spot areas is to demonstrate to the Forest populace, who know practically nothing of forest values, what intensive forest cultivation and improved agricultural and soil practices can really do.

This procedure is similar to that employed in grafting skin on a large burned area of a human body. Small "islands" of new skin are placed at various focal points over the denuded area. They serve to head up the new growth and spread their influence over surrounding areas.

We should build in each Forest Demonstration Area a Forest Community House or People's Center,—a simple inexpensive building with seating capacity from 200 to 350, for the social uses of Forest residents. Native materials could be used. To make the People's Center an integral part of the lives of the Forest residents from the start, we should invite them to participate in the construction and give them jobs with pay for doing so.

Equipment of the People's Center should consist of a stage with screen for motion picture shows, a cook stove, fireplace, benches that can be moved aside to permit dancing, a supply of soft pine sticks for whittling and cuspidors for spitting. That equipment will suffice at the start. Additional equipment, such as a radio, should be added as its usefulness becomes apparent.

The Forest Officer acts as tactful host and invites the people—men, women and children—of the Forest Community to come to the People's Center to see a motion picture show and discuss problems of common interest.

The Forest Officer describes the uses of the People's Center to the people and emphasizes that it is theirs *to use* and *protect*. He allows them full freedom of expression of their opinions and asks their advice on certain measures he takes up. He invites them to sing under the leadership of one of their members. He explains to them that they may shove back the benches and have a dance provided the Forest residents desire it and and will provide their own music, such as a fiddle, and choose their own straw boss or "caller."

The Forest Officer, as host, should emphasize the many uses of the People's Center to the people, and in return demand one thing—protection of the property by the people themselves. A first step must be made somewhere to put the protection of the Forest upon the shoulders of the Forest residents. This is the best place to do it. From protection of the People's Center the program can be widened to protection of the Forest and its resources.

The Forest Officer will remember that in all his plans of organizing groups for protection of the People's Center and of the Forest, he should work with the patriarchal family structure that exists among the people,—with "Pappy" as the boss. He should plan his programs to interest and serve entire families, but point up all his plans for coöperation so that they gain the consent of "Pappy," the male head of the family. When our Forest Officer wins the cooperation of a half dozen "Pappies" in one of these rural communities, he will have won the coöperation of their numerous progeny and blood-kin.

THE plan goes on to satisfy other needs of the forest population, their economic improvement, stocking fish and game, and organizing local groups into associations for the protection of fish, game *and* forest resources.

The plan was designed to fit the needs of the people studied. And the remedial measures are designed to work with—not against—the grain of human nature. In such ways, it is thought, time can be saved in changing human behavior patterns and lasting fire prevention achieved.

Using roof and pompier ladders to get a reach of an extra story at a hotel fire. At this fire firemen made many spectacular rescues, 126 guests in all being guided to safety.

Making Your Ladders Reach

ED STEWART, secretary of the Fire School Committee of the Kansas State Firemen's Association put this question in his monthly News Letter recently. It's a thought-provoking one and Kansas firemen aren't the only ones to whom it presents a problem. It gives a chance to consider numerous angles of practical fire fighting. Here's the question and some discussion. See if it doesn't apply in your town and department as well.

An alarm comes in after midnight from a large 2½-story dwelling in which the attic has been finished for sleeping rooms. The house is filled with smoke and it would be impossible for anyone to make his way down the stairs. Three people have their heads out of the attic windows, from which smoke is pouring, calling frantically for help. The longest ladder you have on your truck is 24 feet. The dwelling has a high foundation, so the ladder lacks 8 to 10 feet of reaching the window, where the people are waiting to be rescued. What would you do? Let them jump and be injured or killed? Stay there and burn to death? Or what?

The most practical answer to the query is to neither let the people jump nor stay there and get burned, but to use a roof ladder. Roof or hook ladders are standard equipment among the ladders which are carried on pumpers. They are usually from 12 to 14 feet long with folding hooks on one end. In this case the roof ladder is not fastened to the roof but on the window sill of the attic.

Roof Ladder

THE REGULAR 24-foot extension ladder is first raised. Next, the roof ladder carried to the top of the 24-foot ladder, then hoisted up to the attic window sill and temporarily hooked on the edge. If possible, the ladder hooks should dig into the window sill rather than hang over into the burning room. There are two reasons why this precaution should be taken. First and most important is that the hook might straighten out if the points are not dug into the window sill. Second, it is essential that the ladder be away from the side wall of the house in order that there may be room to place the feet through the rungs.

If time permits and if the ladders are designed for nesting, the roof ladder may be supported by placing its metal heels on one of the rungs of the extension ladder. The roof ladder should be tied to the extension ladder with a hose strap or dogged to the second floor window sill. When tying the roof ladder to the extension ladder, two precautions should be taken. In order not to put too much strain on the 24-foot ladder, the heels of this ladder should be as close to the side of the house as is convenient for climbing. Second, the two nearest rungs of the respective ladders may be lashed tightly together with the hose strap. If there is not time for all of this procedure (which is likely to be the case) one man should enter the second floor window and reach out to steady the roof ladder with his hands —while another climbs up to help the occupants down from the attic. Where possible, a life line should be carried by the man making the rescue. This rope can be secured at one end of a piece of furniture near the window. The life line is used to assist a person descending the precarious roof ladder.

POMPIER ladders could be used the the same as roof ladders to extend the range of ordinary ladders a story or two. There's the famous case in Chicago where the longest ladder the department had only reached the sixth floor, but where firemen rescued 6 persons on the eighth floor with a pompier ladder.

Not many fire departments carry pompiers on pumpers, but the roof ladder does just as well for cases like this. About the only place pompiers are used regularly is at drill towers to give men confidence in climbing the outside of buildings. It is excellent for use in reaching places inaccessible to other ladders. However, one of its disadvantages is that the rescued person might be afraid to use it as it is not as reassuring as a regular ladder with two spars.

Pompier Ladder

● Disasters like this are tragic proof of the firemen's axiom that "the first five minutes at a fire are worth the next five hours." For statistics show that most large-loss fires can be traced to one of two simple and *preventable* causes—belated discovery or delayed alarm.

A.D.T. provides protection for those vital first few minutes—protection that eliminates the hazards of belated discovery and delayed alarm, by making the detection and reporting of fire *entirely automatic.*

For sprinklered premises, A.D.T. Sprinkler Supervisory and Waterflow Alarm Service *makes the sprinkler an automatic fire alarm, automatically summoning the fire department the instant a sprinkler head opens, or in case of a serious leak. This service also maintains a constant, automatic watch over vital parts of the sprinkler system to assure proper operating condition at all times.*

For unsprinklered properties, the Aero Automatic Fire Alarm *automatically detects fire when it starts, and automatically summons the fire department.*

Not only do A.D.T. Automatic Fire Detecting and Reporting Systems assure maximum protection—these services often result in substantial savings by making it possible to revise or eliminate other less effective but more costly protection measures. Write for further information.

A.D.T. Automatic Fire Detecting and Reporting Systems

...are available with Central Station Supervision in 350 cities. In communities where Central Station Service is not available, these systems may be installed with direct-wire connections to fire headquarters.

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Write for free descriptive booklets

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CENTRAL STATION OFFICES IN ALL PRINCIPAL CITIES OF THE UNITED STATES

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Electric Protection Services

AGAINST FIRE · BURGLARY · HOLDUP

A NATION-WIDE ORGANIZATION

The Fire Alarm Box

PUT IT WHERE IT CAN BE SEEN

Puzzle—find the fire alarm box. Here's an example of a fire alarm box badly placed. Neither pedestrians nor motorists are likely to see it.

N Watertown, Massachusetts, an excited husband woke up one night to find his house on fire and drove his car half a mile to sound an alarm. He might have used the phone as a last resort, but what about the street fire alarm boxes he must have passed on the way?

Twenty-four persons died in a blaze in a western state because some motorist, seeing smoke bulging forth from the upper story of a girls' school, didn't ring the alarm box across the street. Instead, he reported the fire at the fire house two and a half miles away—passing eleven fire boxes.

Where is the nearest fire alarm box? It is very probable that nine out of ten people will not be able to answer this question. In the majority of these cases the lack of knowledge is not the fault of the people. They pay to have a fire department, and a supposedly adequate fire alarm system. They seldom wonder where and how to turn in a fire alarm for they have plenty of other things to attend to. That is why they rely upon the fire department for proper protection.

The Chamber of Commerce of Syracuse, N. Y., sent out a questionnaire a number of years ago to find out what people knew about fire prevention. The most outstanding lack of information was regarding the location of fire boxes. Fifteen thousand people didn't know where any of the fire alarm boxes were located (and incidentally, four thousand people didn't know how to turn in a fire alarm).

You've got to expect indifference and ignorance about fire alarm boxes. It is therefore of great practical importance to put every box where it can be clearly and readily seen.

The accompanying picture entitled "Puzzle—Find the Fire Box" is an example of how *not* to install fire alarm boxes. Sandwiched in between two poles and a group of trees it cannot be readily seen by either motorists or pedestrians.

The location of the fire box should be selected in each case after considerable careful study. The ideal condition is that under which a person may come out of the front door of his home or place of business, and, looking up or down the street, immediately see the fire alarm box. Few communities can afford enough boxes so this can always be done. But a little further study will suggest locations which will make the nearest box easy to locate. For example, persons leaving their house frequently follow a certain course. They walk to the railway depot, bus or trolley stop. They go to the neighborhood shopping center. Even if they habitually drive a car there is usually one direction or path of travel they use most often. These regular paths of travel must be considered in locating boxes. The persons most likely to use a box should be the ones most likely to see it. It therefore should be put where they cannot help seeing it in their regular daily travel to and fro. It isn't enough to put the box merely where they will pass it. The location should be such that they will be forced to notice it.

Placing fire alarm boxes on poles is a common practice but it doesn't make it easy to see the box. A box on a pole is practically invisible from the sides and back. Even painting the pole won't help in many cases—as poles are also painted to denote bus and trolley stops. Red paint, which is commonly used, is fairly conspicuous in daylight, but looks black at night.

In general, boxes should be mounted on a distinctive pedestal, forming an assembly which cannot be mistaken for a taxi phone, mail box, drinking fountain or whatnot. Boxes on poles can be made more conspicuous by a band of white (which can be seen at night) or by red and white stripes. Perhaps a large target of yellow or white, or with a striped color scheme, placed on each pole which has a box would help to make the box easy to see and identify.

Lighting boxes is more of a problem, but it should not be neglected. Boxes should be lighted with an identifying red light. Such lights have to compete with countless neon signs in some locations. Some departments use a purple light for fire boxes in an attempt to get a color which is not like the color of neon or other colored electric signs. Whatever color is employed, it is likely that the location of the box will be an important factor in whether or not the box is visible, for the light itself must not be obscured by other illumination. A street light over or near the box is the least that should be provided.

So as you want the fire department summoned promptly, provide fire alarm boxes to do it. Good mounting and lighting has much to do with their effective use. Above all, put each box where it can be seen.

Boxes on poles are hard to see and the painted red band is too dark to help.

This box on a substantial yet simple pedestal has visibility and distinction.

Fire box on a pedestal and properly located. It is away from other objects and can be readily seen in daytime and, lighted, at night. People passing the spot cannot miss it.

NEW TRAINING TEXTS

THE following fire service training texts have been issued for use in the Pennsylvania course in the Fundamentals of Fire Fighting. These texts are ones originally prepared by a group of fire department instructors under the direction of W. Fred Heisler. They are circulated under a cooperative plan by the fire service training program of the Oklahoma Agricultural and Mechanical College. These texts were revised last summer at a conference of fire department instructors of five states.

These texts are well edited and profusely illustrated. Each manual is 8½ x 10¾ inches in size, planographed, with a sturdy cover and punched for use with a standard ring binder.

Unit I. Forcible Entry and Minor Extinguishment Practices. 35 pages, 25 cents.

Unit II. Ladder Practices. 42 pages, 25 cents.

Unit III. Hose Practices. 49 pages, 25 cents.

Unit IV. Salvage and Overhaul Practices, 25 pages, 25 cents.

Copies of the Oklahoma edition may be ordered direct from the College Book Store, Stillwater, Oklahoma. Copies of the Pennsylvania edition may be obtained from the Firemen's Association of the State of Pennsylvania, Charles E. Clark, Secretary, Wayne, Pennsylvania.

THE Pennsylvania course in the Fundamentals of Fire Fighting consists of 11 units in a course of 18 sessions. Each session is three hours. The texts listed above cover four of the units. Supplementary mimeographed sheets have been prepared to furnish instructors with lesson plans on such other items in the course as: Fire Stream Practices, Fire Fighting Apparatus Practices, Ventilation Practices, Salvage and Overhaul Practices, Inspection, Investigation and Report of Fires, Fire Fighting Tactics (including discussion on Auxiliary Fire Protection Equipment), First Aid and Rescue, and Administration of a Fire Department. As these sheets are primarily for the use of instructors, their distribution may necessarily be limited. For further information on any of these publications, write The Fire School, Public Service Institute, Department of Public Instruction, Harrisburg, Pa.

BOOK REVIEW

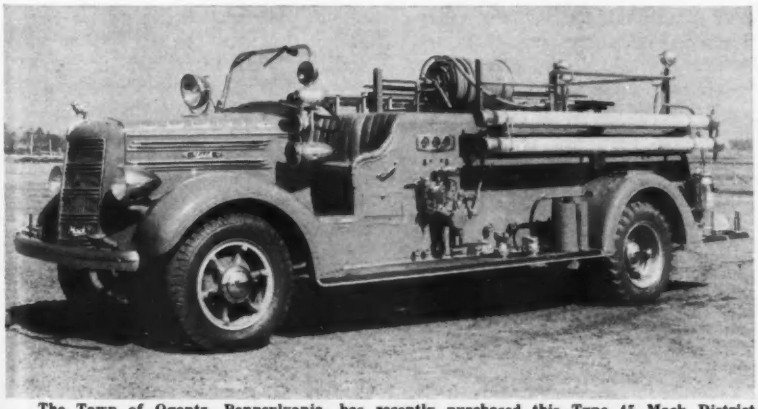
History of the New York Fire Department. By Lowell M. Limpus. (E. P. Dutton & Co., Inc., 300 Fourth Avenue, New York, N. Y.) This latest history of the New York Fire Department traces the development of fire protection in New York City from the early Dutch Colonial days. From the organization of the New York Fire Department on December 3, 1731, it carries the reader through the development of the various colorful volunteer companies. The latter part of the book describes the development of the professional fire department. The history contains many interesting word portraits of the personalities who have largely shaped the development of the present New York Fire Department and also records great fires.

NEW CATALOGUES

An attractive fifty-two page catalogue (No. 30) has just been issued by Cairns and Brother, 444 Lafayette Street, New York, N. Y. This firm specializes in firemen's helmets, in addition to which their catalogue covers clothing, uniforms, badges and other items of firemen's equipment.

An announcement of a new M.S.A. mask by Mine Safety Appliance Co., Braddock, Thomas and Meade Streets, Pittsburgh, Pa. The device is described as consisting of a transmitter and receiver built into the facepiece of the mask allowing conversation between the wearer and a distantly located fresh air base or between two widely separated mask wearers. No batteries are required.

A four page folder describing the Circul-Air Fire Hose Drier, capable of drying by warmed air, 500 feet of saturated fire hose in about four hours. It is manufactured by the Circul-Air Corp., 303 Dwight Bldg., Jackson, Mich.



The Town of Ogontz, Pennsylvania, has recently purchased this Type 45 Mack District Fire Pumper, one of the new Mack fire apparatus models produced especially for the protection of small communities and fire districts. This new unit is a 500 G.P.M. pressure-volume centrifugal type pumper and carries a booster tank of 300 gallons capacity.

INDIAN

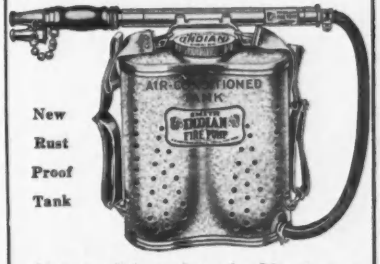
FIRE PUMPS

"THE MOST VALUABLE ACCESSORY FOR ALL AROUND USE."

"THE BEST OUTFIT I KNOW OF — COULD NOT GET ALONG WITHOUT THEM."

"WE HAVE NOTHING BUT COMMENDATION FOR INDIANS."

When so many firemen say "INDIANS are the finest equipment they have ever seen for small fires" they must do a job. Room, building, partition, roof, chimney and all those other bothersome small fires can be handled entirely with INDIANS. No need to lay hose. Water damage held to a minimum. Pump throws powerful pressure stream. No chemicals—INDIANS use only clear water. No ruinous acids to damage furnishings, clothing, etc. Outfit carries by handle or on back. A different use every day. Let us send catalog and fire department testimonials.



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The "Model A" Super

Which Every Volunteer Fire Department Should Know About

Both 1 Quart and 1½ Quart Sizes

Every volunteer Fire Department should know the exclusive qualities of this first-aid extinguisher which experience shows should be the first to be carried into any fire because:—

FIRST:—
It is safe to use on electrical fires. Fyr-Fyter fluid is not only a powerful fire extinguisher fluid, but a most certain insulation—safeguarding the operator against serious injury or possible death from electrical contact.

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It is effective on concealed fires in walls and other "hard to reach" locations and is effective also on fires in greases, oils and the more flammable liquids.

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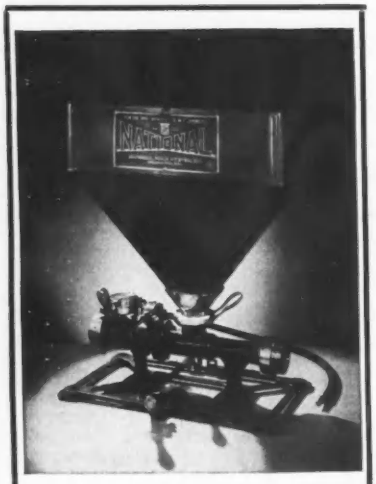

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Capacity 1100 Gallons of foam per minute

Invertible hopper for running board mounting

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Generators and Chemicals

NATIONAL FOAM SYSTEM
INCORPORATED
Philadelphia, U. S. A.

Until the smoke has been let out, firemen can't get in.

Questions on Ventilation

How Some Common Questions on This Subject May Be Answered

1. What are some of the major reasons for ventilation?

The purposes of ventilation are to let heat, smoke and gases out in order to prevent further extension of the fire and to stop hot air and smoke explosions. Ventilation allows firemen to get inside and attack the fire at close range. It also reduces smoke damage to contents and is important in even small store fires for this reason. It should be done early in a fire.

2. How is the type of ventilation necessary at a fire determined and what methods might be used?

Remember that the important thing is to control the fire without unnecessary damage. Gauge the amount of smoke and the location of the fire to determine the means of ventilation. Light smoke throughout the building generally indicates a moderate fire. Heavy smoke forcing itself out of all cracks throughout the building generally indicates a serious fire.

Roof ventilation is most effective but in ventilating small dwelling fires, windows generally should be opened before opening roof. For other buildings, ventilate at roof or top immediately.

Methods of ventilating are: (a) opening skylight or roof over fire; (b) opening windows; (c) breaking show windows, doors or other fixed glass.

3. What precautions should be taken when ventilating?

Always have hose streams ready when ventilating a building as the air may increase the flame. Care should be taken not to open up at points which will endanger exposed property.

4. Where is the need for ventilation greatest?

Since heat rises, the top of a building should usually be ventilated first to prevent smoke explosions, back drafts, and mushrooming of fire on the top floor.

5. When must precautions be taken in ventilating stair shafts?

Use judgment in ventilating through skylights over stair shafts. Heat and smoke can be let out quickly this way, but don't draw the fire so as to cut off escape of the occupants.

6. In opening a roof, what precautions should be taken?

(a) Do not cut through supporting timbers. Sound with your ax to determine place between joists. This greatly reduces repair costs. (b) Be careful to make the opening over the fire as, if the opening is made on the wrong side of the roof, the fire will be drawn across the attic or loft to the vent opening. Roof ventilation is often essential but should be properly done. It is generally better to make one big hole rather than many little ones. Experience shows that a roof opening makes it possible to work inside where it would be otherwise impossible. The proper roof opening gives the fire one direct channel similar to a chimney. While the flame may momentarily increase, it allows firemen to see the fire and approach it at close range. (c) The officer in charge of ventilating should report conditions on the roof to the chief and state whether a line is needed to cover the exposures at the roof or attic.

7. What type of ventilation should be generally tried first?

For many fires, ventilation through windows is sufficient and if properly done it gives the desired results with the least damage. If possible, open all windows instead of breaking them. Do not expect to let a lot of smoke out of one or two windows. At a smoky fire, have plenty of lines ready and open up thoroughly.

8. What should be done before breaking windows?

Open windows if possible instead of breaking them. Use the point of the ax to spring the lock.

9. Where should a man stand when breaking a window behind which there is heat of fire?

Do not stand right in front of a window being broken. Break it from the side using the flat side of the ax or a pike pole.

10. How should windows be opened?

Open windows from both top and bottom in order to let smoke and heat out at the top and fresh air in at the bottom. The most common method is to open them half way from both top and bottom. Be sure that curtains and shades which obstruct the flow of air are removed.

11. How do weather conditions affect ventilating procedure?

The direction of the wind is important as it may tend to carry the smoke, fire, and gases in one direction. It may be wise to ventilate only on one or two sides in some cases, and with a very strong wind it may be necessary to somewhat limit the amount of ventilation so as to get results without unnecessary drafts.

12. How should a store fire be ventilated?

Always open at roof or top floor first for your own protection as well as to properly control the fire. With store fires do not break expensive plate glass show windows if sufficient ventilation can be obtained through smaller openings such as doors and transoms.

As the store is heavily charged with smoke which is forcing itself out of cracks under pressure, never rush in the front door without thoroughly ventilating the building. When the door is opened in such cases, fresh air rushes in and supplies oxygen to the fire resulting in an explosion which may instantly spread the fire throughout the building and blow the firemen into the street. With such severe smoke conditions, have lines ready and ventilate completely the entire building. In such a case it would probably be necessary to break show windows before entering.

Although the LaBour Fire Trailer is relatively small in size, it does a substantial fire fighting job. It delivers 150 gallons a minute and produces 100 pounds per square inch pressure at the pump when drafting from a pond or stream. When used as a booster, it will add 100 pounds to the pressure from hydrant or from another pumper.

The self-priming centrifugal pump cannot clog, and dirty water will not damage it. Priming is self-contained and requires no manipulation or attention at any time. Any passenger car can be used to draw the unit to the fire.

Costing less than $1,000, with full equipment, the LaBour Fire Trailer is a valuable addition to any fire department. Write for details and a copy of Bulletin 47.

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TIME-TESTED
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The Federal Vertical Siren distributes the sound equally in all directions.

The last word in municipal siren design and performance.

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444 Lafayette Street New York

$10.00-$3.00-$2.00 EACH MONTH

PYRENE PRIZE LETTER CONTEST

HAVE you ever put out a fire with a fire extinguisher? If you have, it may mean money in your pocket, for three firemen a month are taking home cash prizes easily won by telling their experiences with fire extinguishers to the judges of the PYRENE PRIZE LETTER CONTEST.

The contest is open to all members of fire departments and organized industrial brigades.

Imagine receiving about one cent for every two words you write—You can, by winning first prize. In a letter, just tell us about an experience where an approved extinguisher of any make did good work in stopping a fire. No fancy writing, no formality — merely send your entry to the address given in the contest rules below.

FIRST PRIZE—$10.00

FRANCIS BRADBURN
La Piata Volunteer Fire Department
La Piata, Maryland

Stove Catches Fire

Besides being a member of the local fire department, I also work for the town's one motion picture house. This is a frame building of two stories with the theatre on the second floor.

The incident of which I tell, occurred early in the fall, shortly after new oil heaters had been installed. It was Saturday, shortly after the show began that the audience was startled by a light in the rear of the hall. One of the stoves had caught fire, and was blazing. The stove was so situated that it would have put two of the exits out of use in a short time had the fire progressed.

The operator of the picture was in his booth cut off from sound and sight of the fire, and the people were frightened.

I was perhaps the only other person there except the operator who knew there was an extinguisher of the foam type in the booth, so I pressed through the crowd and got it. In a few minutes the fire was extinguished, with nothing more lost than time from the show!

SECOND PRIZE—$3.00

E. H. STUART, *Assistant Chief*
Indio Fire Department
Indio, California

Short Circuit Ignites Gasoline

About two months ago I went into a service station located across the street from our fire house.

There was a car in the driveway with the attendant working on the motor. As I walked towards the car flames shot from under the hood. The attendant had been washing the motor with gasoline and using a brush with metal binding the bristles. The metal had shorted on the starter cable and the whole motor was on fire—also the can of gasoline that had been placed on it.

I grabbed a carbon tetrachloride extinguisher that was hanging on the wall and soon had the fire out. There was little damage done to the car.

That one extinguisher saved a $1400 car and a $15,000 service station.

THIRD PRIZE—$2.00

RUSSELL UHLMANSICK, *Chief*
Rising Sun Fire Department
Rising Sun, Ind.

Gasoline Burns in Gutter

One day last winter I received a call for a fire on the street of our town. When I got there with the pumper I found a fire in the gutter running up the street about 100 feet under several automobiles. One of our business men was working on it with a 1½-quart fire extinguisher. I took a 2½-gallon extinguisher off the pumper and soon had the fire out with only slight damages.

When we traced the cause of fire we found that the gas line of a parked car was broken and the gasoline was running in the gutter. Some one came along and lit a cigarette throwing the lighted match in the gutter, thus causing the fire. Had it not been for the extinguishers, about 20 cars would have caught on fire.

CONTEST RULES

1. Contestants in the Pyrene Prize Letter Contest must be members of their local fire department.

2. Letters are to describe actual experiences where an approved fire extinguisher of any make has saved lives or property.

3. Trade names may be used but will be deleted in publication. Publishers reserve the right to edit winning letters to permit publication.

4. Each contestant automatically vouches for the truth of the facts presented from his own or others' experience.

5. Only one letter may be submitted each month.

6. Letters must be legibly written in ink or typewritten on white paper, one side only. Preference will be given to letters not over 250 words in length.

7. Letters received after the 8th of the month will be judged in following month's competition.

8. Monthly prizes in cash will be: 1st, $10.00; 2nd, $3.00; and 3rd, $2.00.

9. Address contest letters to Pyrene Prize Letter Contest, National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

N.F.P.A. Membership for Your Company or Department

Membership with unusual advantages is available to fire companies and fire departments through the Volunteer Firemen's Section of the National Fire Protection Association. Here's the simple plan:

Your company or department applies for regular membership in the N. F. P. A. and pays the minimum $10 annual dues. When the application is accepted, the company or department begins to receive at headquarters the monthly bulletins and publications sent regularly to all members of the Association. Also comes a 100-page *Quarterly* Magazine (four times during the membership year), a volume of annual Proceedings (over 500 pages), a Directory of members, and an Index to printed publications. You thus build up a nice fire library. Membership also places at the disposal of the company or department the Information Service of the Association.

Only Through Membership Can You Get VOLUNTEER FIREMEN for Your Company or Department

The publications and services enumerated above are what regular N. F. P. A. members get for their $10 annual dues. The special membership plan of the Volunteer Firemen's Section provides that *in addition* you get VOLUNTEER FIREMEN magazine for the men in your company or department. (The $10 minimum dues allow you to enroll up to 10 men to receive the magazine: $1.00 per year extra for each man in excess of 10 enrolled). VOLUNTEER FIREMEN is mailed to each man's home address.

USE THIS COUPON FOR SPECIAL MEMBERSHIP PLAN

If your company or department is now a member, pass this coupon to some other company or department which might like to enjoy the benefits of this plan.

National Fire Protection Association, 60 Batterymarch St., Boston, Mass.:

Please send me a membership application blank. I am interested in your special membership plan for our company or department.

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(Chief, Sec'y, Capt., etc.)

Name of Company or Department .....

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Carbon Monoxide and Other Lethal Gases, SMOKE, mists and fumes are all guarded against by use of this new, better mask. Note these points:

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Does your present equipment give a man complete smoke protection? A simple test will tell you, in a minute. Write for Acme Canister Smoke Tester, mailed FREE.

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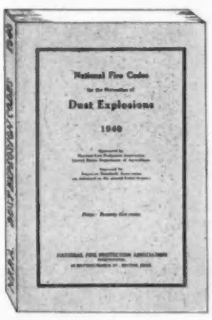

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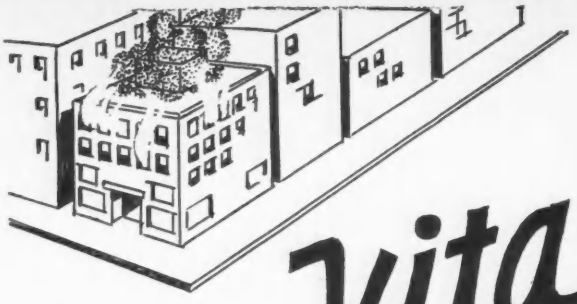

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between the inception of fire and the arrival of apparatus can be bridged by installing more and conspicuously located fire alarm boxes . . . . . .

Three Fold Fire Alarm Box on Type U1000-6 Pedestal

Every fire chief realizes that an inconspicuously located box can mean a *delayed alarm* . . . precious seconds lost that might well result in a conflagration.

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Gamewell surveys indicate that a "box a block" in congested, high value districts are none too many. Then in residential sections a box every 500 feet and where localities are sparsely settled, a box at every group of buildings provides ideal protection.

Make the Three-Fold Fire Alarm System your city's "first line of defense against Fire!"

Check up on the fire alarm box situation in your town, then ask the cooperation of Gamewell engineers.

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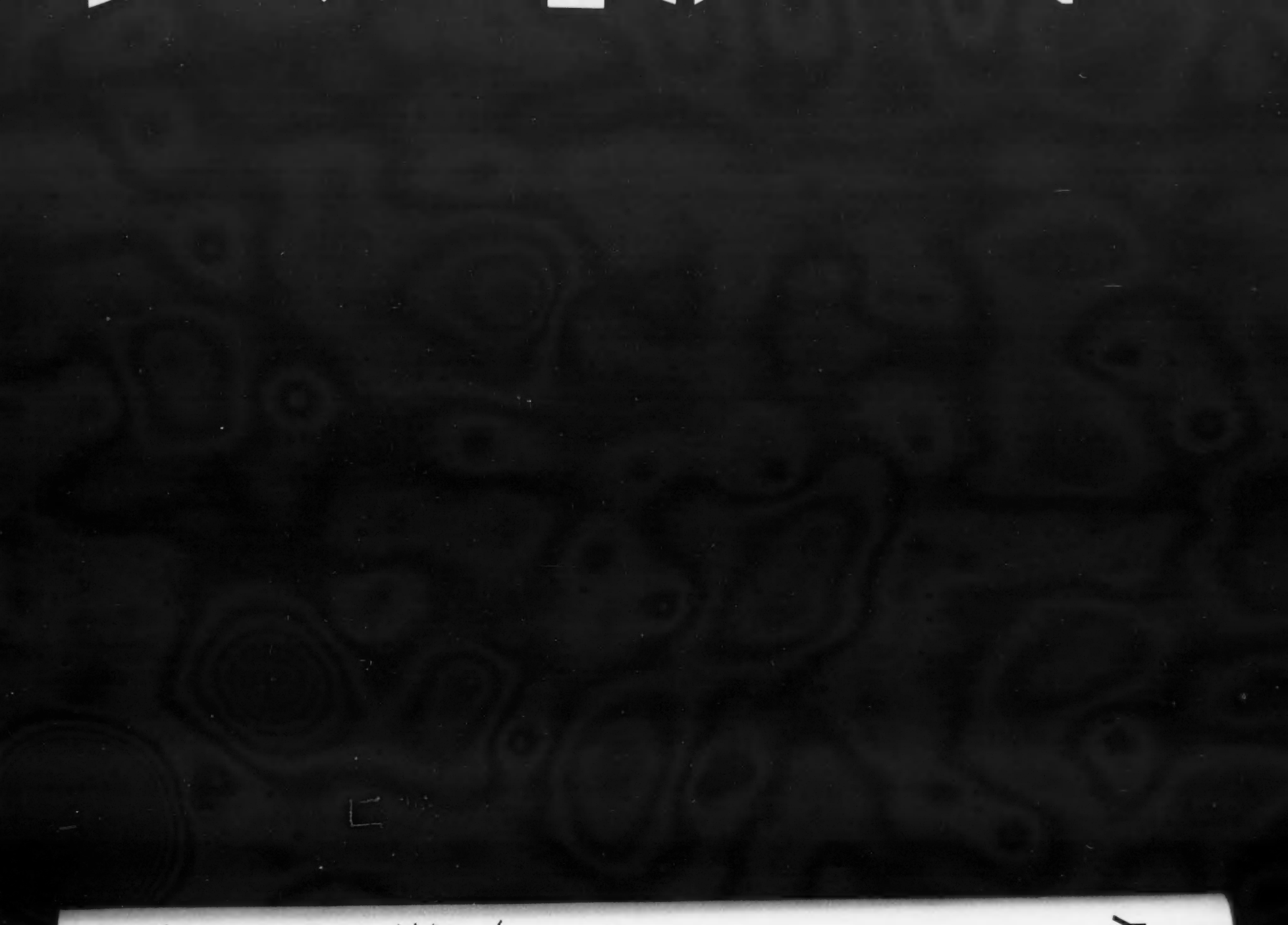
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